

9. Manuela

Program Name: Manuela.java

Test Input File: manuela.dat

Manuela is a space traveler. She regularly flies around the ‘verse in her ship, a Jupiter-wing class 45X-328A. However, in all her travels, she is getting increasingly frustrated by all the various currencies she keeps having to carry around. As such, she would like your help to determine what is the best way to make change in all the different places she goes.

Given the names and the values of the currency of the place where she is arriving, and the amount she needs to make change for, tell her how much of each coin she should need to use the *least* number of coins.

Input: The first line, N, will be the number of data sets to follow. Each data set will begin with a number, i, representing the number of unique types of coins. The next i lines will be the name of each coin, followed by its value. After the ith line, there will be a final value representing the amount of change that needs to be made.

Output: Display the coins used, in alphabetical order, followed by a colon, and the number of each coin needed to use the minimum number of coins.

Sample Input:

```
3
6
two-dollar 200
dollar 100
quarter 25
dime 10
nickel 5
penny 1
337
7
aijika 13
uilika 11
quilika 7
yuilkia 5
dilkia 3
gilikia 2
tikki 1
14159
6
euro 100
pentuplepenny 5
quadruplepenny 4
triplepenny 3
doublepenny 2
penny 1
1027
```

Sample Output:

```
dime: 1 dollar: 1 penny: 2 quarter: 1 two-dollar: 1
aijika: 1089 gilikia: 1
doublepenny: 1 euro: 10 pentuplepenny: 5
```